

## REMARKS

Applicants appreciate the detailed examination evidenced by the Office Action dated July 14, 2003 (hereinafter the "Official Action"). Applicants also appreciate the Examiner's indication that Claim 9 includes patentable subject matter would be allowable if rewritten in independent form including all of the recitations and the base claim and any intervening claims. *Official Action, page 4.*

Applicants maintain, however, that the claims are patentable over the cited references. For example, as understood by Applicants, Hwang and Park do not disclose: performing a first curing process on the SOG layer, **removing less than all of the SOG layer**, performing a second curing process on the remaining portion of the SOG layer, and **removing the remaining portion of the SOG layer**.

Accordingly, Applicants respectfully submit that the pending claims are patentable over Hwang and Park for at least the reasons discussed herein.

### **Independent Claim 1 is patentable over Hwang.**

Claims 1, 11 and 14 stand rejected under 35 U.S.C. § 102 over Korean Publication 1996-035818 to Hwang (hereinafter "Hwang"). *Official Action, page 2.*  
In particular the Official Action states that:

Hwang teaches forming an SOG layer (14) on an integrated circuit substrate; performing a first curing process on the SOG layer (claim 3); performing a second curing process after removing the SOG (14); and removing the remaining portion of the SOG to expose the integrated circuit substrate (fig. 2).

The above cited passage from the Official Action appears to constitute the entire bases of the rejection of independent Claim 1.

Applicants respectfully traverse the rejection and point out that Hwang does not disclose all aspects of independent Claim 1 as required under § 102. Firstly, as understood by Applicants, Hwang, does not state what the Official Action alleges. Hwang actually states:

Hwang teaches forming a first metal layer 13 on a semiconductor substrate 11; forming a photosensitive layer pattern 14 on the first metal layer 13; forming an SOG layer (interlayer dielectric layer) 15 on the first metal layer 13 formed on the photosensitive layer pattern 14 to expose the upper surface of the

photosensitive layer pattern 14; first curing the SOG layer 15;  
removing the photosensitive layer pattern 14; second curing the  
SOG layer 15.

In either case, however, Hwang does not disclose removing less than all of the SOG layer to provide a remaining portion of the SOG layer, performing a second curing process on the remaining portion of the SOG layer and removing the remaining portion of the SOG layer. Furthermore, the Korean Office Action issued by the Korean Patent Office appears to characterize Hwang as describing only a first and second curing process. For example, the Korean Official Action says nothing about whether less than all of the SOG layer is removed after performing the first curing process to leave a remaining portion intact and then performing the second curing process on only the remaining portion as recited in independent Claim 1. Accordingly, Applicants respectfully submit that Hwang does not disclose at least **removing less than all of the SOG layer**, performing a second curing process on the remaining portion of the SOG layer, and **removing the remaining portion of the SOG layer**, as recited in independent Claim 1.

Applicants further submit that Park also does not disclose all of the recitations of independent Claim 1. For example, the Korean Official Action states that "Park discloses a method of forming a contact hole which involves forming an SOG layer on a predetermined structure, performing a first curing process on the SOG layer, removing first and second dielectric layers **and the SOG layer**, and performing a second curing process on the resulting structure" (Emphasis added). Therefore, as understood by Applicants, the cited passage from the Korean Official Action characterizing Park, discusses performing a first curing process, removing **all** of the SOG layer, and then performing a second curing process. In other words, Park appears to discuss removing all of the SOG layer (so that no portion remains) before performing the second curing process.

In contrast, as discussed above, independent Claim 1 recites performing a first curing process on the SOG layer, removing **less than all** of the SOG layer, performing a second curing process on the remaining process of the SOG layer, and removing the remaining portion of the SOG layer. Accordingly, Park does not disclose at least **removing less than all of the SOG layer** between the two curing

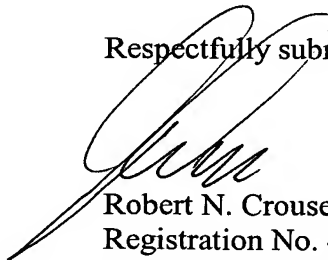
processes. Accordingly, Park also does not disclose all of the recitations of independent Claim 1.

As shown above, Hwang and Park do not disclose all of the recitations of independent Claim 1. Accordingly, Applicants respectfully submit that independent Claim 1 is patentable over Hwang and Park for at least the reasons discussed herein. Furthermore, dependent Claims 10 – 12, and 14 are patentable at least per the patentability of independent Claim 1.

### **CONCLUSION**

Applicants have shown herein that independent Claim 1 is patentable over Hwang and Park by pointing out evidence in the Korean Office Action as to what these references discuss. Accordingly, Applicants respectfully request the withdrawal of all rejections and the allowance of all claims in due course. If any informal matters arise, the Examiner is encouraged to contact the undersigned by telephone at (919) 854-1400.

Respectfully submitted,

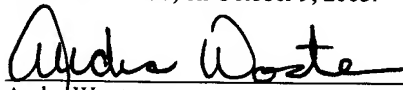


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### **CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: MS Non-Fee Amendment, Commissioner for Patents P.O. Box 1450, Alexandria, VA 22313-1450, on October 9, 2003.



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October 9, 2003